

# 2014

## Forsyth County Community Health Assessment Report



Epidemiology Division  
Department of Public Health  
799 N. Highland Avenue  
Winston-Salem, NC 27102-0686  
336-703-3120

## Preface

This report describes the participants, process, and outcomes of the 2014 Forsyth County Community Health Assessment (CHA). Although this process takes place every three years, the fundamental findings are based on population-based measures and they often change little in such a relatively short period. Some of the critical findings of this process that remain important are: (a) Forsyth County residents experience a high level of preventable disease and death from tobacco use, unhealthy dietary habits, and inadequate physical exercise; (b) Forsyth County residents experience a disproportionately high rate of pregnancy loss and infant death; and (c) Health disparities are even greater in Forsyth County than in the State.

These findings were confirmed in the recent Forsyth County Health Rankings Report which indicated that the strongest predictors of better or poorer health status are better or poorer socioeconomic conditions respectively. The racial differences in socioeconomic status, neighborhood residential conditions, and access to medical care are important contributors to health disparities.

The priority health problems identified three years ago are still central issues. They are: Chronic Disease and its modifiable risk factors (poor dietary practices, inadequate physical activity, and alcohol & tobacco use); Infant Mortality (low birth weight, perinatal conditions and racial disparities.); and Mental Health (homelessness, access to care, depression and suicide).

- Maternal and Infant Health with emphasis on reducing infant mortality and family planning
- Chronic Disease with emphasis on reducing cardiovascular disease, cancer and heart disease
- Mental Health with emphasis on reducing the suicide rate and depression

These priority concerns, and the bases for their identification, are discussed at length in the body of this document. The Forsyth County Department of Public Health, which led the process of the CHA along with Novant Health and Wake Forest Baptist Health, will continue its efforts to improve the health of our community – through better collaboration with our community partners, policymakers and other leaders in our community. The strategies will be outlined in the Community Health Action Plans due December 2015.

Marlon B. Hunter, MAOM, Health Director  
Forsyth County Department of Public Health

## Acknowledgements

We would like to thank the following individuals who participated in the 2014 Forsyth County Community Health Assessment (CHA) process and for their combined contributions towards this report: the 2014 Community Health Assessment Report.

### Community Health Opinion Survey Administrators

*Volunteers from Forsyth County Government; WSSU & UNC Students; Gramercy Research Group and other community partners.*

Acevedo, Arlene	Jan Ma'Luf	Nichollette Heim
Alesha Braswell	John Conricode	Niyha Payne
Alicia Watson	Jonathan Collins	Nohemi Campos
Amber Draughon	Jordan Ivy	Patricia Luna
Beata Debinski	Joshua Luna	Porshe Evans
Brenda Stubbs	Katlin Tucker	Rebecca Thompson
Briana McCoy	Keisha Lucas	Renee Walsh
Caroline Ayaad	Kenya Tuft	Robinetta Blackwell
Carrie Worsley	Krista Kiger	Royland Smith
Ceyerra Garrison	Larissa Henry	Salewa Oyelaran
Cathy Webb	LaShanda Glenn	Sandra Rivera
Cherika Boyd	LaShonda Ouk	Shanice Borden
Christian Warren	LaVie Montgomery	Sharon Roberts
Christine Wanous	Lekan Soremekun	Sharon Singletary
Crista Douthit	Lovette Miller	Sophia Bamby
David O'Brien	Lucretia Hoffman	Tania Acuna
Dominique Bowles	Lynn Kelly	Tomekia Jones
Elizabeth Edmonds	Lynne Mitchell	Tyrone Ceaser
Faith Lockwood	Mashica J Tobias	Veronica Luna
Gertrudis Aguilar	Maya Lindsay	Wayne Bryant
Helena How	Melicia Whitt-Glover	Yalonda Galloway
Ivan Cuff	Melissa Higgs	York Lashannon Faith

### CHA Primary Data Working Group

Alana James-United Way	Jeffery Eads-CenterPoint	Mary L. Wigodsky-Community
Amanda Carrick-Exchange Scan	Jennifer Houlihan-Wake Health	Nakida McDaniel-Community
Andrea McDonald-NovantHealth	Jim Robinson-Community Care	Phyllis D'Agostino-FCDPH
Ayotunde Ademoyero-FCDPH	Joycelyn Johnson-WakeHealth	Salewa Oyelaran-Community
Beata Debinski-WakeHealth	Karen Bartoletti-YMCA	Sandra Wilder-WSSU
Betty A. Alexander-Community	Katrina Redmon-HAWS	Solomon Quick- City of WS
Crista Douthit-Community	Kenell Caesar-City of WS	Sophia Bamby-Community
Debbie Mason-FCDPH	Lekan Soremekun-WSSU	Tamara Smith-NovantHealth
Elizabeth Perkins-Forsyth Futures	Lynne M Mitchell-FCDPH	Tomekia Jones-Community
Janae Joyner-WakeHealth	Lovette Miller-FCDPH	

### CHA Secondary Data Working Group

Ayotunde Ademoyero-FCDPH	Jim Graham-NW Comm. Care	Mari Krane-Forsyth Futures
Carrie Worsley-FCDPH	Jordan Lloyd-YMCA	Mary A. Squire-HealthCare Inc.
Cynthia Sullivan-WSPD	Kineka Hull-WSSU	Monica Cain-WSSU
Debbie Mason-FCDPH	Lynne M Mitchell-FCDPH	Sharon Singletary-Youth Service
Faith Lockwood-WSFCS	Lovette Miller-FCDPH	Sylvia Flack-WSSU
Jeremy Moseley-WakeHealth	Carolyn Marcus -Community	

### Youth Risk Behavior Survey Facilitators

*Volunteers from Forsyth County Health Dept, Social Services, Library, General Services, Sheriff's Office; WSSU & UNCG Students; Gramercy Research Group, Forsyth Futures, WakeHealth and other community partners*

Aaron T. Jackson	Glenda Dancy	Michael King
Alicia Curtis	Heather Heitman	Mike Merrell
Aline Ruhashya	Helena How	Monica Brown
Allisha Ellis	Holly A Hommel	Monique Mann
Allison Gollon	Janet English	Myeisha Selby
Amber Cates	Janiine Torres	Nakia Hannon
Amber Draughon	Jasmine Getrouw-Moore	Patricia Aguilar
Andrea Watson	Jessika Joyner	Porshe Evans
Angela Sheek	Jessika Torres	Rachelle Mills
Angela Thomas	Jinny Mcneil	Renee Walsh
Ann Comtois	Kéaundra Smith	Robinetta Blackwell
Antionette Farmer	Kenneth White	Rochelle Blakeney
Any Celedon	Krista Kiger	Royland Smith
April Davis	Krista Lawson	Sada Gideon
Ashley Curtice	Larissa Henry	Sandra Miller
Ashton Johnson	Laura Brooks	Sarah Arthur
Betty Ferciks	Lesly Guerrero	Shanae Foxx
Brittany Brown	Lorrie Christie	Shannon Davis
Candice Powell	Lovette Miller	Sharon Roberts
Caroline Kraus	Lucretia Hoffman	Stacy Haskins
Carrie Worsley	Lula Lott	Stacy Stewart
Courtney Butner	Lynn Kelly	Stephanie Frimpong
Deana McGlothlin	Lynne Mitchell	Stephanie Smith
Deborah Massenburg	Maiya Phillips	Susan McInnes
Dorinda Mensah	Maranda Sales	Tamara Leak
Elida Saucedo	Mari Krane	Tania Acuna
Elisa Lark	Marlon Hunter	Theresa Hoffman-Makar
Erica Petrocelli	Mary Lambert	Tiffany Williams
Erika Gabriel	Marya Maxwell	Tonya Chesney
Ethel Evans	Mashica Jefferson Tobias	Tonya McDaniel
Ethel Whitt	Maya Lindsay	Whitney Johnson
Etheleen Duckett	Meagan Widener	Yolanda Bolden
Frances Williams	Melicia Whitt-Glover	Yolanda Galloway

### **Community Health Assessment Advisory Group**

Alethea Scholar-WakeHealth	Janae Joyner-WakeHealth	Pedro M. Hernandez-WSSU
Andrea McDonald-NovantHealth	Jennie Anthony-YMCA	Phyllis D'Agostino-FCDPH
Ayotunde Ademoyero-FCDPH	Jennifer A Houlihan-WakeHealth	Richard Moyer-WSSU
Brenda Stubbs- March of Dimes	Kara Morrison-WakeHealth	Robert Jones-DHP:WakeHealth
Carrie Worsley-FCDPH	Lekan Soremekun-WSSU Student	Santachia-Community
Debbie Mason-FCDPH	Lynne M Mitchell-FCDPH	Tamara Smith-NovantHealth
Doris Paez-Forsyth Futures	Margaret Wright-NovantHealth	Melicia Whitt-Glover-Gramercy
Elizabeth Perkins-ForsythFutures	Mari Krane-Forsyth Futures	

### **Focus Group Facilitators, Note Takers and Convening Participants**

Ashley Curtice-FCDPH	Erika Gabriel-FCDPH	Lynne Mitchell-FCDPH
Ashton Putnam-FCDPH	Felicia Wilson-FCDPH	Rodd Smith-FCDPH
Carrie Worsley-FCDPH	Jasmine Getrouw-Moore-FCDPH	Sandra Clodfelter-FCDPH
Debbie Mason-Volunteer	LaToya Sellars- Southside United Health	Sernarra Archie-FCDPH

### **CHA Data Team**

Ayotunde Ademoyero-FCDPH	M Ford- Piedmont Triad Regional Council
Bret Marchant-United Way	Marlon Hunter-FCDPH
Elizabeth Perkins-Forsyth Future	Melicia Whitt-Glover-Gramercy
Jason Clodfelter-MapForsyth	Quintana Stewart-FCDPH
Jesse Day-Piedmont Triad Regional Council	Ronny Bell-WakeHealth
Lori Fuller-Kate B Reynolds	Sara Quandt-WakeHealth
Lovette Miller -FCDPH	Teresa Cutts-WakeHealth
Lynne M Mitchell-FCDPH	

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Compiled by: Ayotunde Ademoyero, MPH  
Director, Epidemiology & Surveillance Division  
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## Executive Summary

### Introduction

Every three years, Forsyth County Health Department and community partners conduct a comprehensive community wide assessment to identify priority health issues and plan interventions to improve the health of the community. It is also required for local health department accreditation through the NC Local Health Department Accreditation Board. During this cycle, we have collaborated with both hospitals: Forsyth Medical Center and Wake Forest Baptist Health to meet the Affordable Care Act/IRS 990 Schedule H Requirements for Not for Profit Hospitals. This document will serve as the basis for prioritizing the community's health needs, and culminate in planning to meet those needs.

### Forsyth County Highlights from the Community Data Overview

- Cancer, heart disease, chronic lower respiratory diseases and stroke are the leading causes of death.
- African Americans continue to experience higher death rates for Cancer, Diabetes, Heart disease, and Kidney Disease compared to Whites
- Whites experience higher death rates for Chronic Lower Respiratory Disease, Unintentional injuries and Suicide compared to African Americans.
- Perinatal condition is the leading cause of death among age group 0-19 years followed by congenital anomalies.
- Other unintentional injuries and motor vehicle injuries are the top 2 leading causes of death among age group 20-39 years.
- The pregnancy rate among Hispanic teens ages 15-17 is four times higher than White, non-Hispanics; and the rate is three times higher among African-American non-Hispanic teens compared to White, non-Hispanics
- Respondents from the 2014 CHO survey indicated that the top three issues that most affect the quality of life are low income/poverty, homelessness and violent crime/dropping out of school
- Respondents from the 2014 CHO survey indicated that the top health issues were overweight/obesity, mental health and chronic disease.
- Respondents from the 2014 CHO survey indicated that the top social issues were poverty, homelessness, unemployment and access to care
- Respondents from the 2014 Mental health focus groups indicated that the top three issues were mental health, transition to civilian life and access to healthcare services
- The emerging themes from the reproductive health focus groups were reproductive life planning, e-health literacy and lack of education in Providers' Offices
- The distressed areas located within the community were in the low income person of color neighborhoods.
- Black/African-American and Hispanic/Latino populations were more likely than the White population to present at the emergency department for preventable health conditions.
- In 2013, the majority of the homeless population was male; more than two-thirds were African-American, and the age range was from under age 5 years to greater than 62 years

- In 2013, the major physical and mental health conditions at program entry were mental health, alcohol abuse, drug abuse, and chronic diseases, HIV/AIDS, and development disabilities.
- From the Middle School Youth Risk Behavior Survey, there was a 22% increase among percent of students who tried to kill themselves from 2011 to 2013 from the middle school youth risk behavior surveys
- From the High School Youth Risk Behavior Survey, there was a 40% increase among percent of students who reported that they had attempted suicide during past 12 months that resulted in an injury, poisoning, or overdose from 2011 to 2013.

### **Ranking Priority Focus Areas**

The CHA Data Team identified 17 social, clinical, behavioral and health outcomes after analyzing and interpreting Forsyth County's primary and secondary data as listed below. The top three priority areas (Chronic disease, Infant mortality and Mental health) were selected based on years of potential life lost and magnitude of the issues.

A combination of an online survey and paper surveys were conducted to rank the top three health issues. They ranked chronic disease first followed by maternal & infant health as second and mental health was ranked third.

Community Action Plans will be developed for the three broad health outcomes of chronic disease, maternal and infant health and mental health. The Forsyth County Department of Health will be developing a community action plan focusing on infant mortality using the collective impact model. The action plans will be due to December 2015.

### **2014 Forsyth County Community Health Report**

The full report can be accessed online at <http://www.forsyth.cc/PublicHealth/publications.aspx>; <http://forsythfutures.org/> and <http://www.healthycommunity.ws/>. This report serves as a reference for many agencies and organizations developing grant proposals and programming. A brochure summarizing findings and recommendations will be developed and mailed to community funders, elected officials; and will be easy to download and print at the websites listed above.



## **Chapter One: Introduction**

### **Background**

Community assessment is the foundation for improving and promoting the health of community members. The role of community assessment is to identify factors that affect the health of a population and determine the availability of resources within the community to adequately address these factors. Through collaborative efforts forged among community leaders, public health agencies, businesses, schools, recreation centers, and hospitals, the community can begin to answer key questions such as: “What are the strengths in our community?”, “What health concerns do community members have?”, and “What resources are available and what do we need in the community to address these concerns?”.

Local health departments in North Carolina are required to conduct a comprehensive Community Health Assessment once every four years for local health department accreditation through the NC Local Health Department Accreditation Board. The 2014 Forsyth County CHA is a collaborative effort of the Forsyth County Department of Public Health (FCDPH) and community members. FCDPH began during the 2011 cycle to maximize partner collaboration with both hospitals: Forsyth Medical Center(Novant Health) and Wake Forest Baptist Health who are required to conduct a Community Health Needs Assessment at least every 3 years (Affordable Care Act, Public Law 111-148).

### **The Purpose of the 2014 Forsyth County Community Health Assessment**

The 2014 Forsyth County CHA aims to:

- Examine the current health status of the community.
- Identify changes since the previous assessment.
- Work with the community to determine the priority issues that should be addressed.
- Develop a community-determined action plan to address identified priorities.
- Report findings to residents, hospitals, other community agencies, and the NC Department of Health and Human Services.

### **The 2014 Forsyth County Community Health Assessment Process**

Forsyth County CHA was conducted between November 2013 and July 2015. In November 2013, community members were invited to the FCDPH to discuss and plan the 2014 CHA process.

The CHA process consisted of eight (8) phases:

1. Establish a community health assessment team
2. Collect primary data from county residents
3. Collect secondary data from local agencies and state of NC
4. Analyze and interpret county data
5. Determine the health priorities
6. Create the CHA document
7. Disseminate the CHA document
8. Develop the community health action plans

The FCDPH staff worked with community partners to recruit members of the Community Health Assessment Team. There were over 80 members which represented a broad diversity of individual with different backgrounds from all areas of the county. Different working groups were formed from this team.

- Advisory Group met regularly to advise each phase of the CHA process and made recommendations for data collection.
- The CHA Primary Data Group consisted of the CHO survey administrators, YRBS facilitators and focus groups facilitators and note takers.
- The CHO survey administrators were trained and administered the surveys in the community over a period of four days
- The YRBS facilitators were trained and administered the surveys in the middle and high schools for three days during two consecutive weeks.
- The CHA Secondary Data Group met monthly to review the secondary data.
- The Data Team met monthly to review both primary and secondary data and identified social, clinical, behavioral and health outcomes, and then prioritized the top health issues.

Data review, collection and analysis are a critical part of the CHA process and are important for the prioritization of health needs and subsequent action plan development.

The process involves the collection and analysis of large data sets, including demographic, socioeconomic, and environmental data, as well as public and professional opinions. The findings from the 2014 Forsyth County CHA were used to develop at least one community action plan addressing the identified priority issue(s). This report is a summary of the available evidence and serves as a resource until the next assessment.

Throughout this report, Forsyth County's data was compared to its peer counties in North Carolina as well as the state of North Carolina.

### **The Structure of the Report**

This assessment examines the major health issues in Forsyth County. It focuses primarily on behavioral, access to health care, social and economic influences, and the physical environment. Chapter 2 provides a brief history and description of Forsyth County. Chapter 3 describes the primary data that were used in the analysis, their collection process and sources. Chapter 4 discusses the health data results and examines how it compares with the health outcomes or issues observed from the secondary data analysis. Chapter 5 discusses Forsyth County's health prevention and promotion needs and resources. Chapter 6 discusses the priority setting outcome and community concerns. This report concludes with a summary of the key findings and the steps that Forsyth County and its partners plan to take to achieve better health outcomes.

## Changes in Health Status Since 2011 CHA

The Community Health Assessment (CHA) is completed every three years. Community health data is analyzed to identify community health changes and establish priority issues. Since 2011 CHA, some areas have shown improvement, some worsened and some have remained the same.

CHA Comparison Legend	Symbol	Meaning
	→	Improvement
	↔	Similar
	←	Worsening

	Selected Health Indicators	Forsyth County Community Assessment Year			National Healthy People 2020
	<i>Selected Health Indicators</i>	<i>2005-9</i>	<i>2009-13</i>	<i>CHA Comparison</i>	<i>Benchmark</i>
<b>Maternal &amp; Child Health</b>	Infant Mortality ( per 1,000 births)	10.7	9.2	→	6.3*
	Teen Pregnancy (Per 1,000 Females ages 15-17)	37.9	26.3	→	36.2
<b>Leading Causes of Death Rate Per 100,000</b>	<i>Selected Health Indicators</i>	<i>2005-9</i>	<i>2009-13</i>	<i>CHA Comparison</i>	<i>Benchmark</i>
	All Cancers	183.5	179.4	→	161.4
	Heart Disease	150.5	145.5	→	103.4
	Chronic Lower Resp. Dx	49.6	48.3	↔	18.7
	Stroke	49.5	43.7	→	34.8
<b>Injury Rate Per 100,000</b>	<i>Selected Health Indicators</i>	<i>2005-9</i>	<i>2009-13</i>	<i>CHA Comparison</i>	<i>Benchmark</i>
	Unintentional	25.6	28.2	←	36.4
	Motor Vehicle	12.0	10.5	→	12.4
	Suicide	10.8	11.4	↔	8.3*
	Homicide	6.6	4.6	→	5.3*
<b>Communicable Disease Rate Per 100,000</b>	<i>Selected Health Indicators</i>	<i>2009</i>	<i>2013</i>	<i>CHA Comparison</i>	<i>Benchmark</i>
	Primary/Secondary Syphilis	31.7	8.1	→	Female-1.3; Male-6.7
	Gonorrhea	235.5	207.2	→	Female-251.9; Male-194.8
	Tuberculosis	2.2	1.7	↔	1.0
<b>Behavioral Health Risks % of Adults</b>	<i>Selected Health Indicators</i>	<i>2009</i>	<i>2013</i>	<i>CHA Comparison</i>	<i>Benchmark</i>
	Smoking	21.2	23.6	←	13.0%*
	Obesity	27.6	33.6	←	30.5%
	No Physical Activity	27.6	24.7	→	32.6%

Note: \*Healthy North Carolina 2020 Target

Forsyth County was established in 1849. It is located in north central North Carolina within the Piedmont Region. Forsyth County is bordered by Stokes, Guilford, Davidson, Davie, Yadkin, and Surrey Counties. Its major cities and towns include Bethania, Clemmons, Kernersville, Lewisville, Rural Hall, Tobaccoville, Walkertown and Winston-Salem (county seat) (Figure 1).

**Forsyth County**

KING  
RURAL HALL  
TOBACCOVILLE  
BETHANIA  
WALKERTOWN  
KERNERSVILLE  
WINSTON-SALEM  
LEWISVILLE  
CLEMMONS

Department of Public Health

1 0.5 1 2 3 Miles

**Quick Facts**

2010 Population: 350,670  
2013 Population Estimate: 361,220  
(US Census Bureau)

4th Largest in NC (population)

Area 412.72 sq. miles

Date Established: January 16, 1849

Charlotte Raleigh

MapForsyth

The U.S. Bureau of Census estimated that in 2013, Forsyth County's population was 361,521. This number represents a 3% increase in Forsyth County's population between April 1<sup>st</sup>, 2010 and July 2<sup>nd</sup>, 2013. In 2013, about 24% of Forsyth County residents was under 18 years of age, and 14% was age 65 years and older (Figure 2).

**Figure 2**

<b>A Brief Demographic Overview of Forsyth County's Population, 2013</b>	
<b>Demographic Characteristics</b>	<b>Percentage</b>
Persons under 18 years	23.80%
Persons 65 years and over	14.10%
Female persons	52.40%
White alone	67.80%
White alone, not Hispanic or Latino	58.00%
Black or African American alone	27.10%
American Indian and Alaska Native alone	0.80%
Asian alone	2.10%
Native Hawaiian and Other Pacific Islander alone	0.10%
Two or More Races	2.10%
Hispanic or Latino	12.40%

Source: U.S. Bureau of Census, Forsyth County  
 Retrieved from <http://quickfacts.census.gov/qfd/states/37/37067.html>  
 Accessed on 06/05/2015

### **Socioeconomic Status**

According to the U.S. Bureau of Census, almost 18% of Forsyth County's residents lived below the federal poverty level between 2009 and 2013. Among Forsyth County residents age 25 and over, 32% had a Bachelor's Degree or higher. Between 2009 and 2013, Forsyth County's per capita income (2013 dollars) was \$26, 461, and median household income was \$45, 431. Homeownership rate between 2009 and 2013 averaged 61%.<sup>1</sup> Based on the State Center for Health Statistics (2014), in 2013, about 21% of Forsyth County's mothers had less than a high school education, and 23% were high school/GED graduates.<sup>2</sup>

### **Education**

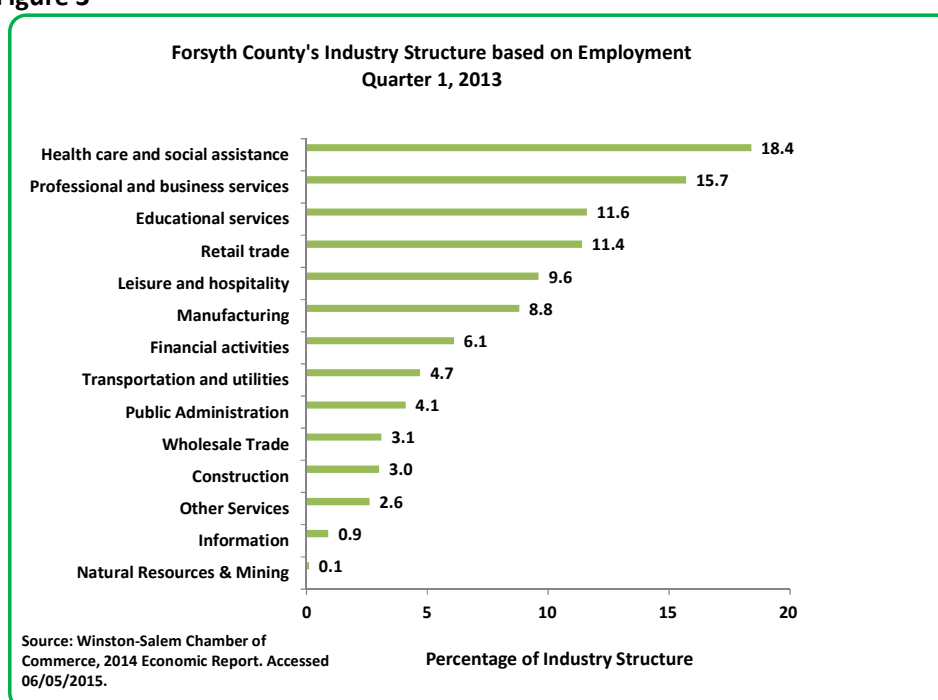
Winston-Salem/Forsyth County Schools (WSFCS) was formed in 1963 with the merger of the Winston-Salem and Forsyth County school systems. The WFSFCS is the fourth largest school system in North Carolina. It is made up of 43 elementary schools, 14 middle schools, 15 high schools and nine special schools. WFSFCS serves about 54,000 students each year. For the 2011/2012 school year, the WFSFCS senior graduation rate increased for the fifth straight year to almost 81%.<sup>3</sup>

Forsyth County's post-secondary schools include Forsyth Technical Community College, Piedmont Baptist College and Graduate School, Salem College, The University of North Carolina School of the Arts, Wake Forest University, and Winston-Salem State University.

## Economic Development

In the first quarter of 2013, Forsyth County's largest employment sector was health care and associated services (18.4%) (Figure 3). Professional and business services (15.7%), educational services (11.6%), retail trade (11.4%), and leisure and hospitality (9.6%) complete the top five.

**Figure 3**



## Highway and Ground Transportation

Major highways that currently traverse Forsyth County include:

- |                    |        |        |
|--------------------|--------|--------|
| • I-40/Business 40 | I-74   | US 52  |
| • US 158           | US 311 | US 421 |
| • NC 65            | NC 65  | NC 66  |
| • NC 67            | NC 109 | NC 150 |

The North Carolina Department of Transportation (NCDOT) is in the process of constructing the Winston-Salem Northern Beltway. This multi-lane freeway begins at US 158 and ends at US 311. This freeway is expected to alleviate congestion and enhance safety along heavily traveled routes such as US 52 and US 311.

## Ground Transportation

The Piedmont Authority for Regional Transportation (PART) and the Winston-Salem Transit Authority (WSTA) are the two major modes of transportation that serve Forsyth County's residents. The WSTA serves specific communities in Winston-Salem. It has 27 weekly routes, and operates between 5:30am to 12:00 midnight Monday thru Saturday. The PART serves Forsyth and other regional counties. It operates between 6:00am and 7:00pm Monday thru Friday. The PART offers express services, as well as vanpool and carpool services.

### Medical Care

Wake Forest Baptist Health and Novant Health Forsyth Medical Center are the two major medical care facilities in Forsyth County. Both are ranked in the top eight of North Carolina's more than 50 hospitals. In addition, Wake Forest Baptist Health is nationally ranked for cancer treatment, ear, nose & throat, nephrology, and pulmonology.

### Major Points of Interest

**Old Salem** is a historic district in Winston-Salem. It features a living museum that interprets the cultural landscape of its Moravian founders. The district showcases the communal buildings, churches, houses, and shops of the Moravian settlement in North Carolina. Old Salem was declared a National Historic Landmark (NHL) in 1966. Salem was originally settled by members of the Moravian Church in 1766. When Forsyth County was established in 1849, Salem chose not to be the county seat and instead granted land for a county seat that was then called Winston (after Joseph Winston, a local Revolutionary War hero). Salem and Winston became Winston-Salem.

**Tanglewood Park** is a public recreational facility that is owned by Forsyth County. It is located at 4201 Manor House Circle, Clemmons, NC. Tanglewood's more than 1,100 acres display phenomenal architecture and streams, woodlands, and grassy pastures that allow Forsyth County's residents and visitors the opportunity to enjoy the golf courses, swimming, gardens, horseback riding, tennis, BMX racing, and camping.





### Chapter Three- Health Data Collection

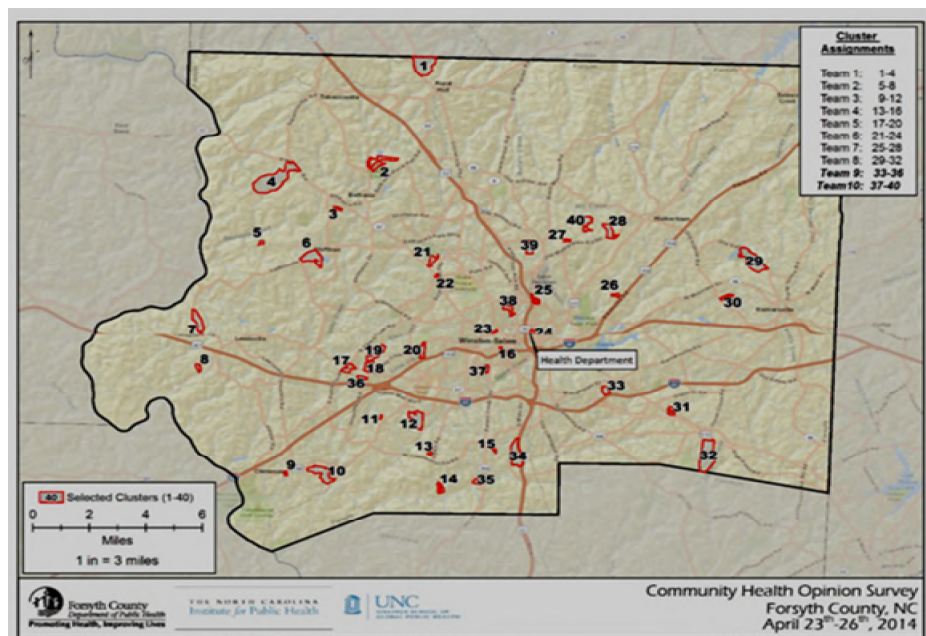
The Community Health Assessment is based on the analysis of primary and secondary data. Primary data was collected through the Community Health Opinion Survey and focus group discussions. Secondary data was accessed at the State Center for Health Statistics as well as from community partners.

#### Primary Data

##### ***The Community Health Opinion Survey***

The Community Health Opinion (CHO) Survey was conducted between April 23<sup>rd</sup> and May 23<sup>rd</sup>, 2014. The survey questionnaire consisted of 66 questions and was divided into the following nine sections: *Quality of Life Statements, Community Improvement, Health Information, Personal Health, Access to Care/Family Health, Emergency Preparedness, Food Security, Health Department Services, and Demographic Characteristics*. (See Appendix for a copy of the implemented questionnaire). To select the sample population, a two-stage cluster sampling methodology was employed, using population-based sampling weights from each census block. The first sample selection was performed in ESRI's© ArcMap GIS software using the Community Assessment for Public Health Emergency Response (CASPER) toolkit developed by the Centers for Disease Prevention and Prevention. In order to match sampling efforts in 2011, in the first stage of sampling 40 census blocks were randomly selected with a probability proportionate to the population size. The selected census blocks are shown in Figure 1. In the second stage of sampling, 7 random interview locations were selected in each census block. The two-stage cluster sample design employed in this survey should result in a representative sample of Forsyth County.

**Figure 1. Map of Selected Census Blocks for the 2014 Community Health Opinion Survey**





The North Carolina Institute for Public Health (NCIPH) staff trained FCDPH staff, public health students and other volunteers in survey methodology using a handheld computer with mobile GIS technology as well as a handheld geographic positioning systems (GPS) unit. Interviewers obtained oral consent in English or Spanish before interviewing potential survey participants. Eligible participants were at least 18 years of age and a resident of the selected household. Responses were recorded at the time of interview either on paper surveys, or electronically on Google Nexus Tablets using a mobile application designed and created by NCIPH based on the CDC's mobile version of EpiInfo. Each participant was told that he or she could refuse to participate without any repercussion. Each participant was also told that at any time during the survey they had the right to refuse to respond to any question if he or she so chose. Participants were informed that the information collected from the survey would be kept confidential, and that no identifying information would be linked to their individual responses. The data was analyzed in SAS 9.3 (Cary, NC).

### **Focus Groups- Reproductive Health & Mental Health**

Focus groups are groups who are convened to solicit their opinions on a range of issues. Focus group discussions may be structured or semi-structured. In structured discussions, the moderator introduces an issue, and once consensus is reached, he or she introduces the next question or issue. In semi-structured focus group discussions, the moderator introduces an issue or asks a question from which other questions may follow based on feedback from the focus group. For the 2014 CHA, the FCDPH employed the semi-structured approach because it had the potential to highlight community issues or concerns that were not previously considered. The focus group discussions centered on reproductive health because it is recognized that improvements in reproductive health have significant health benefits for the whole family.

***The Forsyth County Infant Mortality Reduction Coalition*** convened five focus groups to examine the issues that were influencing reproductive health. These focus group discussions were conducted during Summer 2014. Focus group discussions were convened at Cleveland Homes, Salem Gardens, Winston-Salem State University (WSSU), Forsyth Technical, and Boys and Girls Club of Winston-Salem. A total of forty-one females and four males with mean age of 25 years participated in the focus group discussions. The group consisted of primarily African-Americans (only 4 Hispanic/Latino and 2 White participated in the discussion). Mean income of the focus group was between \$20K and \$29K.

*The Forsyth County Infant Mortality Reduction Coalition* is a group of concerned citizens, organizations, and institutions working together to prevent infant deaths. It promotes women's health prior to pregnancy because it believes that this approach is the best long-term solution for improving maternal and infant health

***North Carolina Council for Women*** conducted several focus group discussions in different counties in North Carolina regarding challenges faced by discharged military veterans and their families. Two focus groups were convened in Forsyth County in Clemmons in September 2013. A total of 14 military veterans; 9 females and 5 males participated in the focus group discussions. The participants were predominately African Americans.

*North Carolina Council for Women* is the state's leading voice on key issues impacting women. The N. C. Council for Women monitors and ensures accountability for over \$10 million in grants to 293 agencies for shelter and support services to domestic and sexual violence survivors. The N. C. Council for Women approves the state's batterer intervention programs.

## **Secondary Data**

Secondary data is data that has already been collected. The secondary data selected for analysis were from agencies and non-profit organizations that collect the referenced data regularly, and whose data identification, collection and archival process are recognized as consistently of the highest quality. Secondary data used in the analysis were taken primarily from:

### ***The NC Department of Health and Human Services, State Center for Health Statistics***

The North Carolina Department of Health and Human Services (DHHS) is responsible for ensuring the health, safety and well-being of all North Carolinians. The State Center for Health Statistics is responsible for data collection, health-related research, production of reports, and maintenance of a comprehensive collection of health statistics. Its goal is to provide data that aids in health issue identification and health policy development. *Birth risk factors and characteristics, mortality, and morbidity* data for Forsyth, peer counties and state of North Carolina were retrieved from the State Center for Health Statistics between February 2<sup>nd</sup> and March 19<sup>th</sup>, 2015. <http://www.schs.state.nc.us/data/>

### ***The 2013 Winston-Salem/Forsyth County High School & Middle School Youth Risk Behavior Survey***

The Youth Risk Behavior Survey System (YRBSS) was developed by the Centers for Disease Control and Prevention (CDC)/Division of Adolescent and School Health (DASH) to monitor six health risk behaviors. These health risk behaviors are unintentional injuries and violence; sexual behaviors; alcohol and other drug use; tobacco use; unhealthy dietary behaviors; and inadequate physical activity. North Carolina Healthy Schools has conducted the survey state wide every two years. The results of the survey can assist government agencies, schools, community organizations and other stakeholders to identify the critical health needs of children and adolescents and develop programs to mitigate them.

Parents had the option to decline their child's participation in the survey by returning the Passive Parental consent Form that was sent home before the scheduled survey date. Students could choose not to participate or skip any question that they choose not to answer.

In 2013, the Winston-Salem/Forsyth County Schools (WSFCS) YRBS was administered in 19 public high schools to 1,711 students of which 1,379 responded. After editing, 1,370 questionnaires were usable for analysis. Each questionnaire consisted of 94 questions. The response rate for high schools was 100% and the response rate for high school students was 80%. In 2013, the Winston-Salem/Forsyth County Schools (WSFCS) YRBS was also administered in 19 public middle schools to 1,930 students of which 1,710 responded. After editing, 1,683 questionnaires were usable for analysis. Each questionnaire consisted of 74

questions. The response rate for middle schools was 100% and the response rate for middle school students was 87%. This 2014 CHA includes data from the WSFC 2013 High and Middle Schools' YRBS.

### ***CenterPoint Human Services***

CenterPoint Human Services is a managed care organization responsible for assuring that accessible, quality and accountable care is available for those with mental health, intellectual and developmental disabilities and substance abuse challenges. It aims to become the best practice public model of managed care for exceptional and compassionate oversight of the provision of care for those with mental health, intellectual and developmental disabilities and substance abuse challenges.

The 2014 CHA uses data from the *CenterPoint Human Services Community Needs Assessment*. This report is based on focus group discussions that were conducted February 24 to March 5, 2014. These group discussions took place in each of the four catchment area counties to gather information on identified service needs, barriers, and potential solutions. A total of seven focus groups with 49 participants were held with 2 focus groups held in Winston Salem and 1 each in Danbury, King, Mocksville, Eden and Reidsville.

The identified top needs and barriers for all disability groups were as follows:

- Expansion of services (respite, inpatient, I/DD day programs, supported employment)
- Psychiatric services/affordable medications
- Expansion of child services - particularly for autism spectrum disorders
- Greater access to crisis services/more responsive crisis services
- Increased community education regarding available services and resources
  - Increased public awareness of county issues and needs/ encourage community partnership and collaboration to solve community problems
- Lack of/limited services in parts of rural counties/needs client choice/reduced wait times
- Expansion of Peer Support services
- Increased rate for Assertive Community Treatment Teams (ACTT)
- Increased availability of Integrated Dual Diagnosis Treatment (IDDT) – not just for ACTT
- Expansion of transportation options for access to services, work and recreation
- Increased supported housing capacity
- Housing and services for the homeless

<http://www.cphs.org/publications/network-development-needs-assessment/>

### ***The United Way***

United Way is a nationally-recognized leader in delivering positive, measurable impact in communities. Its focus is on improving education, income and health. United Way of Forsyth County advances these objectives in the Forsyth community through various community-level projects. The 2014 CHA includes data from the United Way 2014 Annual Report for Forsyth County.

<http://www.forsythunitedway.org/pilotFiles/photoGallery/files/Agenda%20for%20Change2.pdf>

### ***The US Bureau of Census***

The US Bureau of Census conducts the U.S. *decennial census*. As required by the U.S. Constitution, this *decennial census* has been conducted in years ending in "0" since 1790.<sup>1</sup> This 2014 CHA utilizes the 2013 Bureau of Census's population data sets for Forsyth County.

### ***Forsyth Futures***

Forsyth Futures is a non-profit collaborative of residents, organizations and institutions working together to address critical community issues. It collects data on economic self-sufficiency, educational success, civic engagement, physical and mental health, safety, and sustainable environment. This CHA includes data from the *2014 Access to Health Care Report*, *2014 Education Report*, and *2014 Local Foods Study*.

[http://www.forsythfutures.org/images/PDFs/forsythcounty\\_communityfoodsystem\\_2013.pdf](http://www.forsythfutures.org/images/PDFs/forsythcounty_communityfoodsystem_2013.pdf)

### ***The North Carolina Uniform Crime Reporting (UCR) Program***

The North Carolina Uniform Crime Reporting (UCR) Program is part of a nationwide, cooperative statistical effort administered by the Federal Bureau of Investigation. Its data is meant to inform law enforcement administration, operation, and management. This report provides Forsyth County with critical data on many social indicators.

### ***The County Health Rankings & Roadmaps***

The *County Health Rankings & Roadmaps* is a Robert Wood Johnson Foundation program that was implemented in collaboration with the University of Wisconsin-Madison's Population Health Institute. The program is designed to assess each county's health status and assign rankings (in comparison to other counties in the state) to two separate measures: health outcomes and health factors. It uses data from the National Center for Health Statistics (NCHS), the Behavioral Risk Factor Surveillance System (BRFSS), the American Community Survey (ACS) and others. This 2014 health assessment uses the county health rankings as a benchmark for its findings.

[http://www.forsyth.cc/PublicHealth/Documents/CHR2014\\_FC.pdf](http://www.forsyth.cc/PublicHealth/Documents/CHR2014_FC.pdf)

### ***The Piedmont Triad Regional Council (PTRC)***

The Piedmont Triad Regional Council (PTRC) is a voluntary association of municipal and county governments, enabled by state law to promote regional issues and cooperation among members. The PTRC serves 72 member governments in and around the Greensboro/Winston-Salem/High Point metro including the following twelve counties: Alamance, Caswell, Davidson, Davie, Forsyth, Guilford, Montgomery, Randolph, Rockingham, Stokes, Surry, and Yadkin counties. The 2014 CHA includes data from the PTRC's regional planning report. <http://piedmonttogether.org/report/equity-piedmont-triad>

### ***The North Carolina Coalition to End Homelessness (NCCEH)***

The North Carolina Coalition to End Homelessness (NCCEH) is a statewide membership nonprofit created to secure resources, encourage public dialogue, and advocate for public policy change to end homelessness. The 2014 CHA includes data from its *2014 Homelessness Report* on Forsyth County.

[http://www.forsythfutures.org/images/mprhomelessness2013\\_final\\_webversion.pdf](http://www.forsythfutures.org/images/mprhomelessness2013_final_webversion.pdf)

***Novant Health Forsyth Medical Center***

Novant Health Forsyth Medical Center is a tertiary care hospital. It offers emergency medical, surgical, rehabilitative and behavioral health services. Under a confidentiality and non-disclosure agreement, the hospital provided information on emergency department and other community health issues.

***Wake Forest Baptist Health***

Wake Forest Baptist Health is a teaching hospital that serves as the region's principal tertiary referral center. It provided data on the emergency department's use as well as other community health issues.

***The Environmental Protection Agency (EPA)***

The Environmental Protection Agency (EPA) is the federal agency that is charged with the mission of protecting human health and the environment. The 2014 CHA includes data from the EPA to assess Forsyth County's Environmental Health.

***NC Department of the Environment and Natural Resources (DENR)***

NC Department of the Environment and Natural Resources (DENR) Administers regulatory programs designed to protect air quality, water quality, and the public's health. The agency's activities range from helping to make sure drinking water is safe to managing state parks and forests for safe and enjoyable outdoor recreation experiences. The 2014 CHA includes data from the DENR to assess Forsyth County's Environmental Health.

***Limitations of the Data Collection Process***

The limitation of this method is that stratifications to a finer scale, or within subpopulations, results in imprecise estimates with limited interpretive value.

## Chapter Four: Health Data Results

### Overview of Data and Findings

This chapter highlights the social, economic and health data used by the CHA Data team to prioritize health issues. About seventeen (17) social, behavioral, clinical and health outcomes were identified after analyzing and interpreting Forsyth County's primary and secondary data.

### Community Health Opinion Survey

The Community Health Opinion (CHO) survey was administered to community residents at randomly selected households throughout the county. The survey included questions related to community health problems, issues and concerns, access to healthcare and health behaviors, food security, emergency preparedness, health department services and demographic characteristics. A total of 224 interviews were conducted with a sampling success rate of 80%.

Overall findings are below:

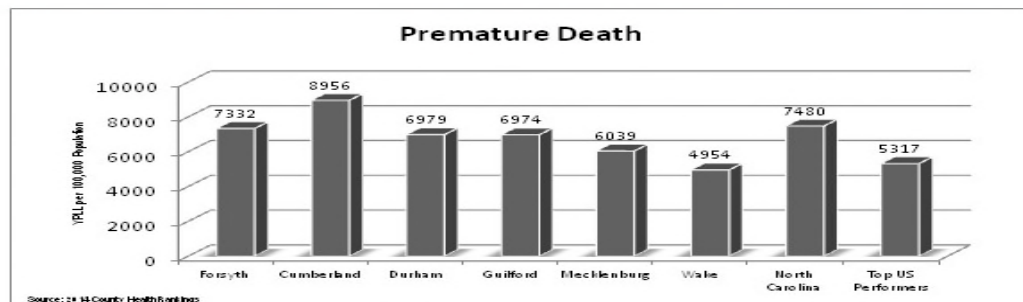
- The top three issues that most affect the quality of life are low income/poverty, homelessness and violent crime/dropping out of school
- The top three services that needed improvement were availability of employment, positive teen activities and high paying employment.
- Regarding personal health responses, 75% reported their health was good to excellent; 70% reported engaging in physical activity for 30minutes in the past 30days; 47% did not receive the flu shots and the top three chronic health conditions previously diagnosed were high blood pressure, high cholesterol and depression or anxiety.
- Regarding access to care/family health responses, when sick, 70% visit the Doctors office; 10% hospitals and 10% urgent care. Barriers cited to receiving healthcare were lack of insurance, insurance did not cover what i needed and cost too high.
- The top health issues were overweight/obesity, mental health and chronic disease.
- The top social issues were poverty, homelessness, unemployment and access to care.

### Mortality Data

Forsyth County was compared to healthstats peer counties which is determined by population size, individuals living below poverty level, population under 18 years and 65 years and older, and population density: **Forsyth, Cumberland, Durham, Guilford, Mecklenburg and Wake.**

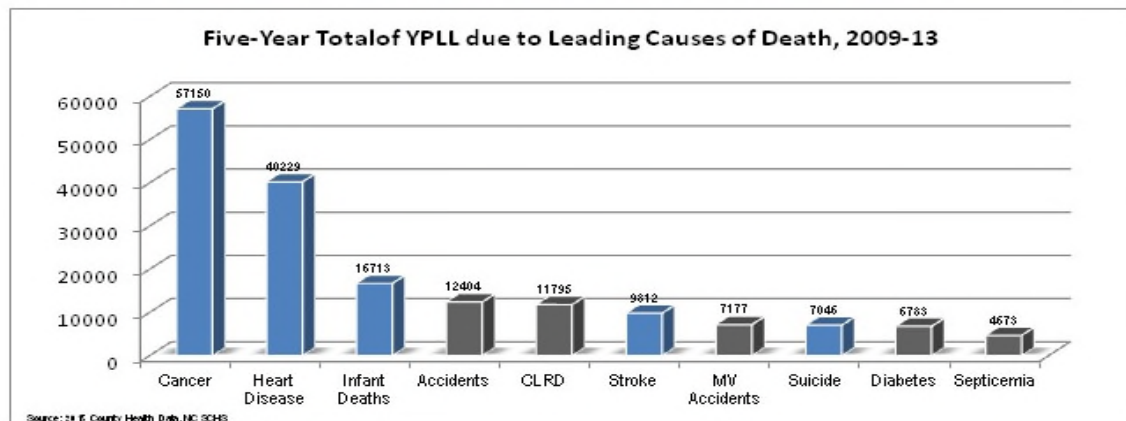
Premature Death is the years of potential life lost before age 75 (YPLL-75). Every death occurring before the age of 75 contributes to the total number of years of potential life lost. YPLL measures the impact of disease and death, and their cost to society. Reducing YPLL is an important public health goal.

Forsyth County's rate of premature death is lower than the State but higher than its peer counties except Cumberland County



Cancer and Heart Disease are the two leading causes of death in Forsyth County, North Carolina and the nation that contribute most to Years of Potential Life Lost.

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### NC Council for Women Mental Health Focus Group

Focus groups were conducted among 14 military veterans in September, 2013. They were 9 females and 5 males. The questions posed were related to challenges after discharge, transition to civilian life, resources available and health challenges after being discharged, services available for family and services not available to support family. Below are some of the responses :

- Challenges after Discharge were mental distress; loss of camaraderie between military members; difficulty being comfortable with non-military persons; transitioning to civilian life; finding work and code of ethics/standards lacking in civilian life (work).
- Transition to Civilian Life were still very aggressive; ability to use tact, open & direct conversation; and overprotective of children.
- Health challenges after being discharged were military sexual trauma(MST); not enough healthcare providers for veterans; chronic posttraumatic stress disorder (PTSD); depression; sleep disorder; given high powered drugs to keep them doped up; and afraid to tell others about mental challenges
- Services available for family were Vet Center for counseling; Financial & Housing issues; Some centers for combat vets only not family

- Services NOT available to support family were unemployment; healthcare providers for children; restart program transitioning to civilian life; better legislation; deprogramming in Hawaii-helpful; can not interact with spouses and financial assistance.
- The top three issues were mental health, transition to civilian life and access to healthcare services.

### **Reproductive Health**

The Forsyth County Infant Mortality Reduction Coalition convened five focus groups to examine the issues that were influencing reproductive health such as access, attitudes, and support of family planning.

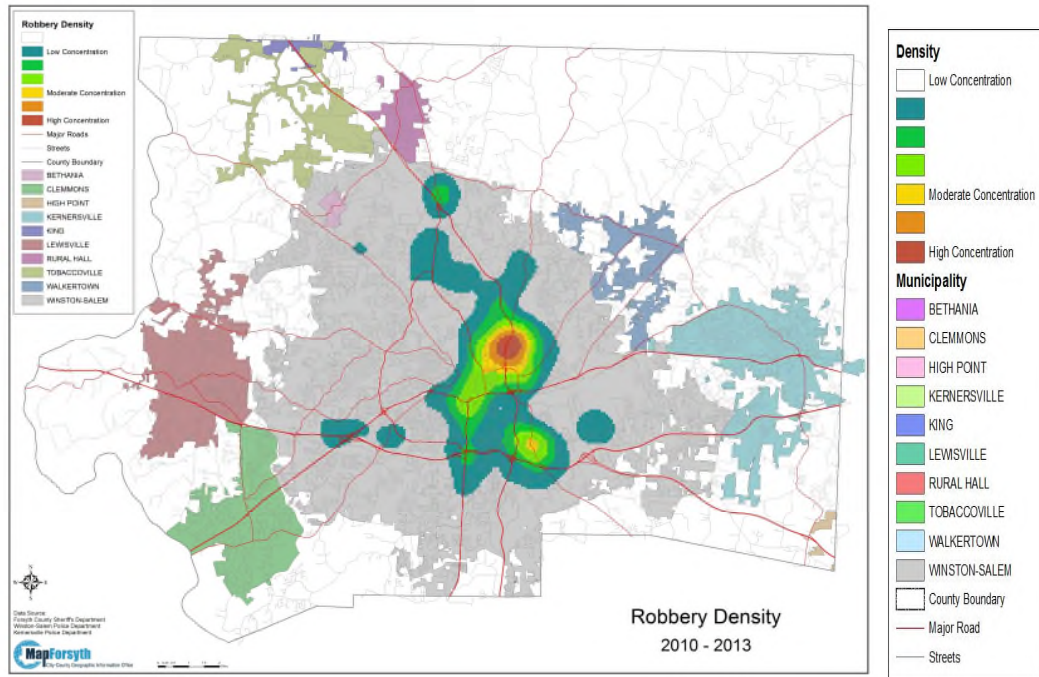
- Responses regarding Access were majority accessed services through private providers, others came to FCDPH, DHP, TWC, Planned Parenthood, Student Health Center; and slightly more than half were generally happy, when not complaints were
  - More time with provider / felt rushed / long waiting times
  - More patient education
- Responses regarding Attitude were all groups recognized that FP was important to time pregnancy; people should start early and views differed about the onset of seeking services
  - Onset of Menses / Significantly before
  - After unplanned pregnancy or STD
- Responses regarding Support were majority talked with family, friends, and providers; comfort level varied across the women; providers' offices and internet sources provided information and no discussion in clinical settings on Reproductive Life Planning, only in support groups or CBOs (e.g. Big Sisters, Young Lives for Teen Moms).
- The emerging themes were reproductive life planning, e-health literacy and lack of education in Providers' Offices.

### **Crime in Forsyth County**

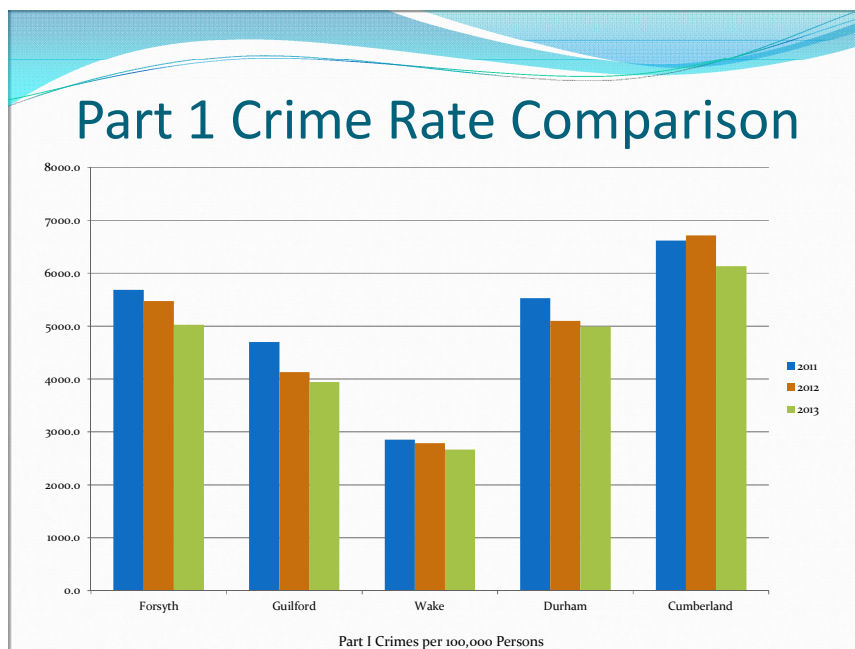
There are three major law enforcement agencies in Forsyth County: Forsyth County Sheriff's Office, Winston-Salem Police Department and Kernersville Police Department and three additional agencies: Wake Forest University Police, Winston-Salem State University Police and UNC School of the Arts Police.

- Part 1 Crimes consist of Violent Crimes (murder, rape, robbery and aggravated assault) and Property Crimes (burglary, larceny and motor vehicle theft).
- Part 2 Crimes consists of other assaults, arson, forgery, fraud, embezzlement, stolen property, vandalism, weapon, prostitution, sex offense, drug offense, gambling, family offense, DWI, liquor law, disorderly conduct, runaway and all other miscellaneous offenses.





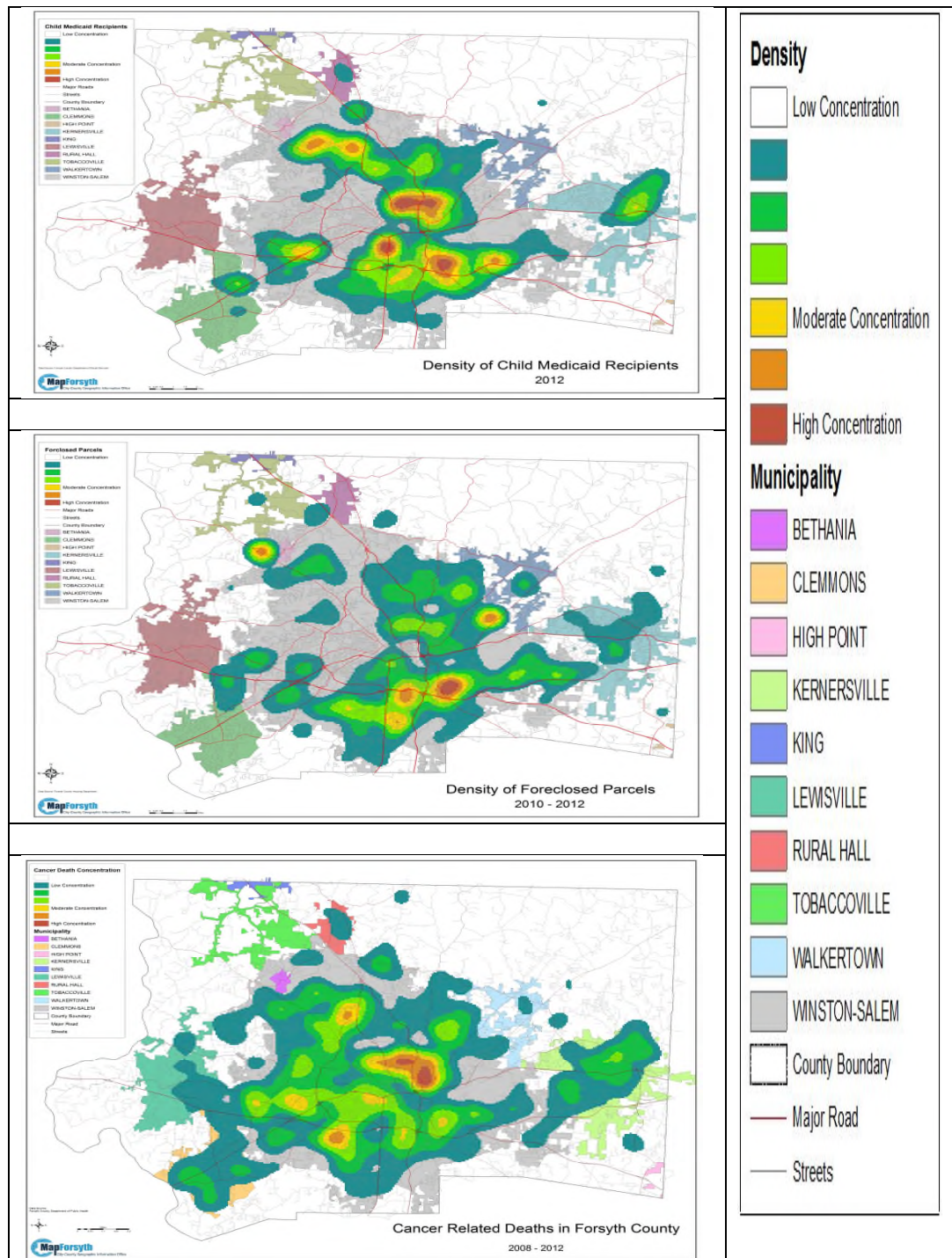
The Robbery Density heat map highlights the geographic density of robbery on a map. It is a two-dimensional representation of data in which values are represented by colors. The red color represents high concentration of robbery and green lower concentration of robbery. This is part of Map Forsyth identified distressed areas which is in low income person of color neighborhood.



Part 1 Crime (murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft and arson) has gradually decreased since 2011. The crime rate in Forsyth County is similar to Durham but higher than Guilford and Wake counties.

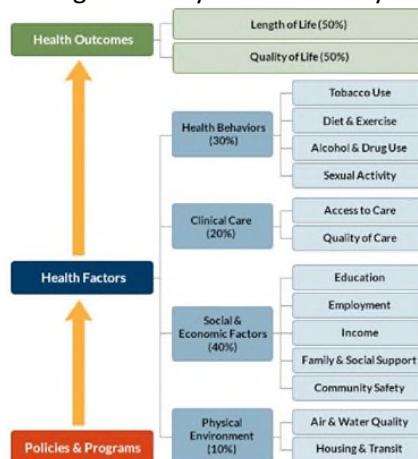
## Distressed Areas

MapForsyth identified distressed areas in Forsyth County using social and economic indicators such as median household income, assessed residential values, census data, social services and health data, foreclosures and crime data. The red color represents the high concentration of the feature on the map and green the lower concentration. Below are a few examples.



## County Health Rankings

Where we live matters to our health. In this County Health Rankings model, health outcomes such as mortality (deaths) and morbidity (sickness) are influenced by health factors that include health behaviors, clinical care, social and economic factors and environmental factors. In 2014, about **11 measures** in Forsyth County were significantly worse than the State and some peer counties. In 2014, Forsyth County ranked the 26th healthiest county out of the 100 North Carolina counties. Forsyth is the state's fourth largest county and with many resources.



2014 County Health Ranking	Cumberland	Durham	Forsyth	Guilford	Mecklenburg	Wake	North Carolina	Top US Performers
<b>Health Outcomes</b>	<b>73</b>	<b>17</b>	<b>26</b>	<b>14</b>	<b>6</b>	<b>1</b>		
<b>Morbidity and Mortality</b>								
Premature Death	8,956	6,979	7,332	6,974	6,039	4,954	7,480	5,317
Poor or Fair health	18%	17%	14%	12%	14%	11%	18%	10%
Poor physical days	4.4	2.8	3.0	2.7	2.8	2.8	3.6	2.5
Poor mental days	4	2.9	3.0	3.1	3.2	2.6	3.4	2.4
Low birth weight babies	10%	9.4%	10.4%	9.5%	9.2%	7.9%	9.1%	6.0%
<b>Health Behaviors</b>								
Adult Smoking	22%	14%	20%	17%	14%	13%	20%	14%
Adult Obesity	34%	29%	26%	27%	26%	25%	29%	25%
Food environment index	5.8	6.6	6.3	6.5	6.7	7.7	6.9	8.7
Physical inactivity	30%	20%	22%	24%	21%	19%	25%	21%
Access to exercise opportunities	68%	86%	81%	88%	87%	86%	65%	85%
Excessive drinking	11%	15%	12%	13%	16%	15%	13%	10%
Alcohol-impaired driving deaths	35%	38%	42%	37%	35%	36%	33%	14%
Sexually transmitted infections	1,124	710	766	1,028	796	534	568	123
Teen births	54	41	44	32	40	26	44	20
<b>Clinical Care</b>								
Uninsured	16%	19%	19%	19%	18%	15%	19%	11%
Primary care physicians	1,321:1	809:1	997:1	1,342:1	1,156:1	1,243:1	1,462:1	1,051:1
Dentists	1,178:1	1,412:1	1,681:1	1,897:1	1,541:1	1,574:1	2,022:1	1,392:1
Mental health providers	577:1	255:1	593:1	621:1	661:1	553:1	696:1	521:1
Preventable hospital stays	62	46	62	52	45	46	60	46
Diabetic monitoring	82%	87%	87%	88%	88%	90%	88%	90%
Mammography screening	57.8%	67.60%	65.6%	68.5%	64.9%	70.2%	67.6%	71%
<b>Social &amp; Economic Factors</b>								
High school graduation	78%	74%	79%	83%	74%	81%	79%	N/A
Some college	69.3%	71.2%	63.2%	66.9%	72.0%	77.6%	63.1%	70%
Unemployment	10.3%	7.6%	9.0%	9.8%	9.4%	7.5%	9.5%	4.4%
Children in poverty	25%	28%	32%	25%	22%	15%	26%	13%
Inadequate social support	22%	22%	18%	19%	18%	18%	21%	14%
Children in single-parent	44%	42%	39%	40%	36%	28%	36%	20%
Violent crime	554	641	564	505	581	274	372	64
Injury deaths	62	54	59	60	44	38	65	49
<b>Physical Environment</b>								
Air pollution-particulate matter	12.1	12.3	12.8	12.6	12.6	12.2	12.3	9.5
Drinking violations	3%	0%	0%	2%	0%	0%	2%	0%
Severe housing problems	17%	18%	16%	17%	16%	14%	16%	9%
Driving alone to work	82%	75%	84%	82%	77%	80%	81%	71%
Long commute-driving alone	25%	23%	20%	21%	33%	31%	30%	15%

### **Access to Health Care**

#### *Understanding Access to Health Care, Forsyth County, NC, 2014*

Forsyth Futures conducted research to examine health care resources, how they are utilized, barriers to health care, and gaps in services. To conduct this research, it analyzed data from the Small Area Health Insurance Estimate (U.S. Census Bureau), local hospitals, focus groups discussions, expert/practitioner interviews, and an opinion survey.

The research found that almost one-half of emergency department visits were for primary care preventable or treatable conditions. Diseases of the heart were the most common condition treated in the emergency department. While females were more likely than males to use the emergency department services, infants under the age of one were more likely than any other age group to be seen in the emergency department for treatment. Black/African-American and Hispanic/Latino populations were more likely than the White population to present at the emergency department for preventable health conditions.

The findings from this research showed that in Forsyth County, factors that influence access to health care are

- Lack of adequate insurance coverage
- Cost of health insurance premiums, co-pays, and prescription
- Scarcity of health care resources in high need areas
- Lack of access to dental & behavioral health providers
- Barriers to providing care in community clinics
- Difficulty in navigating the health care system

### **Food Availability**

#### *Forsyth County's Community Food System, 2013*

Forsyth Futures conducted research that aimed to characterize the local food system in Forsyth County to increase the positive impact of local food production and consumption in the community. For this research, local foods were defined as '*fruits, vegetables and livestock that were produced, raised or processed in Forsyth or its surrounding counties*', and community gardens were defined as '*an active produce garden organized and maintained by a group of gardeners for the benefit of the community*.'

The community food system included all local grocers as well as producers, processors and distributors of food to Forsyth County's residents. Forsyth Future analyzed primary data collected through stakeholder interviews, focus group discussions and an opinion survey as well as secondary data from the U.S. Census of Agriculture. Two major aspects of this study was its focus on the commercial production of foods and the role of community gardens.

The research found that there is an increasing decline in cropland, the number of farms and the number of new farmers while there has been an increase in the median age of farmers as longtime farmers' age. Only 1% of farmers are Black/African-American, only 0.8% is Hispanic/Latino, and 13% are females. The research also found that while there is interest in the consumption of local foods, issues such as the coordination and dependability of delivery of products/produce are limitations that farmers and restaurateurs have not yet resolved.



Responses to interviews showed that community gardens play a positive role in expanding healthy food availability to those who may not have otherwise had access, and is a source of bonding for community members.

Overall, the major findings that directly influence Forsyth County's public health are:

- The need for stakeholder coordination
- Increased interest in local food systems
- The need to increase/improve consumer knowledge and value of local foods
- The need to increase the accessibility of local foods

### **Homelessness**

#### *Status of Homelessness in Forsyth County, November, 2014*

United Way of Forsyth County's presentation on the status of homelessness in Forsyth County showed that the 5 year average for Forsyth County's Point-in-Time (PIT) was 531 individuals, and that in 2013, an unduplicated total of 1,837 people were homeless in Forsyth County.

- In 2013, the majority of the homeless population was male; more than two-thirds were African-American, and the age range was from under age 5 years to greater than 62 years
- In 2013, the major physical and mental health conditions at program entry were mental health, alcohol abuse, drug abuse, and chronic diseases, HIV/AIDS, and development disabilities.
  - About 31% of entrants had three or more health issues.
  - 11% were veterans
  - More than ½ had no income

The 10 year comprehensive plan to eliminate chronic homelessness and decrease temporary homelessness uses a "housing first" model that has been demonstrated to keep individuals in housing more effectively than traditional models.

- The 2013 Point-in-Time Count (January 30) showed that the chronically homeless population in Forsyth County has decreased 58 percent since 2005, the year before Winston-Salem/Forsyth County adopted the Ten Year Plan to End Chronic Homelessness
- Sixty-seven percent of Forsyth County's chronic homeless are remaining in permanent housing for one year or more
- Since 2006, 580 new units of housing (385 permanent supportive, 145 transitional) have been added to house individuals who were previously homeless

### **City of Winston-Salem, Bicycle and Pedestrian Crashes, 2014**

The *Bicycle and Pedestrian Crashes* study covered the period 2002 to 2011. During this 10 year period, the trend in crashes remained consistent. There were a total of 318 bicycle crashes and 684 pedestrian crashes.

Cyclists were typically

- Males (89% of crashes)
- African Americans (54% of crashes)
- Ages 1 –15 years (25% of crashes)
- Rarely used helmets (only 16% used helmets)

Crashes were primarily due to inattention and failure to yield right-of-way.

Walkers were typically

- Males ( 64% of crashes)
- African Americans (55% of crashes)
- Ages 41 –50 years (18% of crashes)

Cause of crashes was primarily inattention and failure to yield right-of-way.

In comparison to peer counties, Forsyth County had the lowest rate of crashes among the urbanized counties (0.6 crashes/10,000 residents). In comparison, there were 12 State of North Carolina counties that had a crash rate of 1.3 crashes/10,000 residents.

#### Health Benefits versus Risks of Crashes

Cyclists risk due to car crashes

- 5 –9 days of decreased life expectancy

Cyclists risk due to air pollution

- 8 –40 days of decreased life expectancy

Cyclist benefit due to increased physical activity

- 3 –14 months of increased life expectancy

#### **Equity in the Piedmont Triad, November 6, 2014**

The Piedmont Triad Regional Council's (PTRC) examination of *Equity in the Piedmont Triad* focused on the relative location of age-specific and race/ethnicity-specific populations to social and environmental hazards and assets. This PTRC focuses on Surrey, Stokes, Rockingham, Caswell, Yadkin, Forsyth, Guilford, Alamance, Davie, Davidson, Randolph, and Montgomery Counties.

To examine equity in the Triad, PTRC used social and environmental factors such as flood plain, food desert, housing, impaired streams, parks & greenway access, public waste facilities, and toxics release inventory. The relative location of these factors were examined in relation to sub-populations based on age, race/ethnicity, employment, high school education status, poverty, female-headed single households, two-parent households, people for whom English is (as) a second language (ESL), and vehicle access.

The PTRC's research showed that in general minority populations and population age 65 and over were at a disadvantage in relation to access to parks and greenways. However, they were more likely than others to live in or close to hazardous environments and food deserts.

- The majority of the population living in or adjacent to food deserts were African Americans and Hispanic/Latino
- The African American population was more likely than others to have less access to parks & greenway
- African Americans and Hispanics were more likely than others to live in close proximity to public waste facilities

#### In Forsyth County

- Food deserts were concentrated in neighborhoods that were between 61% and 100% minority
- The majority of public waste facilities were located in neighborhoods that were between 61% and 100% minority

### **Youth Risk Behavior Survey**

The Youth Risk Behavior Survey System (YRBSS) was developed by the Centers for Disease Control and Prevention (CDC)/Division of Adolescent and School Health (DASH) to monitor health risk behaviors.

The Youth Risk Behavior Survey (YRBS) is one component of the YRBSS. It has been modified to reflect the health questions deemed pertinent to North Carolina middle school and high students. North Carolina Healthy Schools has conducted the survey state wide every two years. The results of the survey are meant to assist stakeholders in identifying the critical health needs of children and adolescents and develop programs to mitigate them.

In 2013, the YRBS was administered in 19 public middle schools in the Winston-Salem/Forsyth County (WSFC) School System and a total of 1, 683 students completed the survey. The questionnaire consisted of 74 questions. The response rate for schools was 100% and the response rate for students was 87%. The results are representative of all students in grades 6-8. In 2013, the YRBS was also administered to 19 public high schools in Winston-Salem/Forsyth County School System and a total of 1, 370 high school students completed the survey. The questionnaire consisted of 94 questions. The response rate for schools was 100% and the response rate for students was 80%. The results are representative of all students in grades 9-12.

### **Middle Schools**

#### **Positive Results**

- The percentage of students who had a drink of alcohol other than a few sips has gradually decreased since 2009 with a 21% decrease from 2011 to 2013
- There was a 17% decrease among percent of students who were offered, sold or given an illegal drug on school property from 2011 to 2013
- There was an 8% decrease among percent of students who had seen other students being bullied in their school from 2011 to 2013
- There was a 33% decrease among percent of students who observed gang activity in school from 2011 to 2013

#### **Areas for Improvement**

- There was an 11% increase among percent of students who carried a weapon, such as a gun, knife or club from 2011 to 2013
- There was a 7% increase among percent of students who were bullied on school property from 2011 to 2013
- There was a 17% decrease among percent of students who reported being taught about abstaining from sex activity from 2011 to 2013
- There was a 22% decrease among percent of students who reported being taught about chlamydia, gonorrhea, syphilis, from 2011 to 2013
- There was a 22% increase among percent of students who tried to kill themselves from 2011 to 2013
- There was a 24% increase among percent of students who played video/computer games, use computer for other than school  $\geq 3$  hours on school day from 2011 to 2013

#### **Summary of results for Middle Schools based on race/ethnicity:**

- White, non-Hispanic were more likely than others to

- Carry a weapon
- Be bullied (at school and electronically)
- Get the most sexual education at school
- Be physically active
- Receive regular checkups, dental visits
- African American, non-Hispanic were more likely than others to
  - Ride a bike without a bicycle helmet
  - Be in a physical fight
  - Watch television/play video game
  - Walk to school
  - Have asthma
- Others were more likely than others to
  - Use alcohol, tobacco, drugs
  - Not wear a seat belt
  - Have suicidal thoughts and make suicide plans

## High Schools

### Positive Results

- The percent of students who smoked cigarettes on one or more days in the past 30 days has gradually decreased since 2009 with a 28% decrease from 2011 to 2013
- The percent of students who had 5 or more drinks of alcohol in a row on at least 1 day during the past 30 days: binge drinking has gradually decreased since 2009 with a 22% decrease from 2011 to 2013
- There was a 31% decrease among percent of students who used marijuana one or more times in the past 30 days from 2011 to 2013
- There was a 44% decrease among percent of students drove a car or other vehicle when they had been drinking alcohol in the past 30 days from 2011 to 2013
- There was a 46% decrease among percent of students were in a physical fight on school property in past 12 months from 2011 to 2013
- There was a 28% decrease among percent of students who reported gang activity at their schools from 2011 to 2013

### Areas for Improvement

- There was a slight increase, 7% among percent of students who texted or emailed while driving a car or other vehicle in the past 30 days from 2011 to 2013.
- The percent of students who reported that they had played video games or used computer for something that was not school work for 3 or more hours on a school day has gradually increased since 2009 with a 36% increase from 2011 to 2013
- The percent of students who reported drinking alcohol or using drugs before their last sexual intercourse in the last 3 months has gradually increased since 2009 with a 63% increase from 2011 to 2013
- There was a 40% increase among percent of students who reported that they had attempted suicide during past 12 months that resulted in an injury, poisoning, or overdose from 2011 to 2013.



Summary of results for High Schools based on race/ethnicity:

- White, non-Hispanic were more likely than others to
  - Smoke cigarettes, drink alcohol, and binge drinking
  - Rarely wear bike helmet
  - Be bullied at school
  - Report eating breakfast
  - Be physically active 60+ minutes
  - Get 8+ hours of sleep
- African American, non-Hispanic were more likely than others to
  - Use marijuana
  - Rarely wear seatbelt
  - Report gang activity as problem
  - Have ever had sexual intercourse, early age, multiple partners
  - Report soda consumption
  - Watch television/play video games
  - Have asthma
- Other were more likely than others to
  - Drive a car after consuming alcohol and driving in a car with someone who had drink alcohol
  - Carry weapons, be in a physical fight, experienced forced sex
  - Not use a condom
  - Have suicidal thoughts, make suicidal plans, and attempt suicide
  - Practice unhealthy weight loss strategies, describe themselves as overweight, and are trying to lose weight

**The Forsyth Promise, 2014 Report**

The Forsyth promise is that *Every Child in Forsyth County receives the best education possible and is fully equipped to thrive throughout life*. Its goals, outcomes and promises are that each child:

- Succeeds in school
- Develops social and emotional skills
- Prepares for the changing world of work
- Participates in the community

**Recent observances:**

*Prepared for Kindergarten in Literacy*

- At the beginning of the 2012-13 school year, 57% of kindergartners met literacy benchmarks, meaning that more than a third (43%, or 1,842 students) did not meet literacy benchmarks

*Proficiency in Reading, 3<sup>rd</sup> Grade*

- In the 2012-13 school year, 44% of all 3<sup>rd</sup> grade students were proficient in reading, meaning that more than half (56% or 2,145 students) did not demonstrate proficiency
- Black, Hispanic and Limited English Proficient (LEP) students demonstrated the lowest proficiency levels. Only 27% and 10%, respectively, were proficient.
- Only 25% of 3<sup>rd</sup> grade economically disadvantaged students (EDS) were proficient in reading

*Proficiency in Mathematics, 3<sup>rd</sup> Grade*

- In the 2012-13 school year, 47% of all 3<sup>rd</sup> grade students were proficient in mathematics, meaning that more than half (53% or 2,059 students) did not demonstrate proficiency
- Black and Hispanic and Limited English Proficient (LEP) students demonstrated the lowest proficiency levels — only 26% and 24%, respectively, were proficient
- Only 31% of 3<sup>rd</sup> grade economically disadvantaged students (EDS) were proficient in mathematics

*Proficiency in Reading, 8<sup>th</sup> Grade*

- In the 2012-13 school year, 41% of all 8<sup>th</sup> grade students were proficient in reading, meaning that more than half (59% or 2,314 students) did not demonstrate proficiency
- Black, and Hispanic and Limited English Proficient (LEP) students demonstrated the lowest proficiency levels. Only 23% and 5%, respectively were proficient
- Only 23% of 8<sup>th</sup> grade economically disadvantaged students (EDS) were proficient in reading

*Proficiency in Mathematics, 8<sup>th</sup> Grade*

- In the 2012-13 school year, 32% of all 8<sup>th</sup> grade students were proficient in mathematics, meaning that more than two thirds (68% or 2,684 students) did not demonstrate proficiency
- Black and Hispanic and Limited English Proficient (LEP) students demonstrated the lowest proficiency levels — only 14% and 6%, respectively, were proficient
- Only 16% of 8<sup>th</sup> grade economically disadvantaged students (EDS) were proficient in mathematics

*Graduates from High School in 4 Years*

- In the 2012-13 school year, the four-year graduation rate for all students was 82%, meaning that 18% or 713 students, dropped out or took more than four years to graduate
- In the 2012-13 school year, 11% fewer males graduated from high school in four years compared to females
- Hispanic students had the lowest four-year rate: 70%
- There was only a 7% difference in four-year graduation rate between economically disadvantaged students (EDS) compared to not economically disadvantaged students (Not-EDS)

*Ready for College*

- In the 2012-13 school year, 30% of all 11<sup>th</sup> grade students scored benchmark or higher on the Reading ACT test, meaning that more than two thirds (70% or 2,405 students) did not score benchmark or higher
- Students in 11<sup>th</sup> grade who were Black were the least likely to score benchmark or higher on the Reading ACT test — only 10% scored benchmark or higher. Only 12% of 11<sup>th</sup> grade economically disadvantaged students (EDS) scored benchmark or higher on the Reading ACT test, compared to 42% of not economically disadvantaged students (Not EDS)

## Chapter 5: Prevention & Promotion Programs

The Forsyth County Department of Public Health has several programs that address child, teen, family and community health. The following programs are offered at the Health Department.

### Child Health Programs

**Be Healthy School Kids Program** is a nutrition education program targeting Pre K through 5th grade students at 44 Winston-Salem/Forsyth County Elementary Schools. Eighteen of the schools served have at least 80% or more of the student population eligible for free or reduced meals. The schools served have at least 70% or more of the student population eligible for free or reduced meals. At each school, we strive to reach students, staff, faculty, and parents through bulletin boards, morning announcements, bi-monthly newsletters, class presentations, PTA workshops, and/or special events. A Public Health Educator collaborates with principals, teachers, students, and parents to support healthier lifestyle choices through individual change and environmental policies.

**The School Health Program** is provided by Public Health nurses to address the health concerns, medical problems, and health care needs of the school age population. The program places emphasis on prevention, early intervention and remediation of health issues. Public Health nurses make weekly visits to each school and home visits as indicated to help meet the health needs of students, parents, schools and the community, thus facilitating effective education and positive student outcomes. Five schools designated as ECP (Exceptional Children's Programs) have a full-time public health nurse on staff.

### Preventive Dental Health Program

Preventive Dental Health provides community based non-clinical preventive dental health services including dental screening and referral for children within Forsyth County. Program services are by appointment and free to the public. As part of the program, education is provided for community organizations, parents, teachers and children in an effort to reduce dental disease. Preventive Dental Health Program frequently collaborates with other organizations within the community to provide special services for under-served children including the Give Kids a Smile Program and dental sealant projects.

The **Forsyth County Childhood Lead Poisoning Prevention Program (CLPPP)** strives to carry out the Forsyth County Board of Health Childhood Lead Poisoning Prevention Rules which recommend that all children be tested for lead at the age of 1 and again at the age of 2 during a well child visit (routine check-up) or at least once before the age of 6, regardless of the age of the home. CLPPP monitors children's blood lead levels, provides early intervention, conducts environmental lead investigations and enforces abatement, when necessary. All children under the age of 6, pregnant women and unborn children are at risk from lead poisoning. Adults may also be at risk because of their jobs or hobbies. Forsyth County CLPPP was formed in 1997 to increase the number of children tested for lead poisoning and decrease the number of children affected by lead poisoning. Although there has been an increase in the number of children tested for lead poisoning, children are still being lead poisoned and the affects of lead will be with them their entire lives.

## Teen Health Programs

**The Teen Initiative Project (TIP)** is a community education program for teens between the ages of 9-21 funded by Forsyth County. The educational sessions focus on developing positive self-esteem, improving decision making skills, effective communication, puberty, hygiene, abstinence and birth control. Other topics discussed are sexually transmitted diseases, building positive relationships and refusal skills. Teens involved in TIP become peer counselors, and work to educate their friends and community members on how to make responsible decisions. These programs are available to schools, churches, organizations, community groups and individuals in Forsyth County. TIP conducts both one-time sessions and series of classes.

**Teen Talk** is an Adolescent Pregnancy Prevention program funded by Forsyth County. Teen Talk provides ongoing educational sessions throughout the year for young women between the ages of 9-18. The program focuses on the wellbeing of each participant by helping participants develop positive self-esteem, make informed decisions, excel academically, and encourage career development. Teen Talk introduces young women to community service projects and various cultural activities. The program is currently offered in middle schools and community sites.

## Maternal & Child Health Programs

**WIC** is a federally-funded health and nutrition program for women, infants and children. WIC helps families by providing checks for buying healthy supplemental foods from WIC-authorized vendors, nutrition education, and help finding healthcare and other community services. Participants must meet income guidelines and be pregnant women, new mothers, infants or children under age five. In Forsyth county we provide WIC services to over 11,000 women, infants and children. WIC is available to pregnant, breast feeding and postpartum women, infants and children up to age five. To participate, persons must:

- Be a resident of Forsyth County.
- Have a family income less than 185% of the U.S. Poverty Income Guidelines. A person receiving Medicaid, Work First Families Assistance , or Food Stamps automatically meets the income eligibility requirement.
- Be at nutritional risk. A nutritionist or other health professional makes the nutritional risk assessment at no cost to the participant, usually at the local WIC office.

### Care Coordination for Children (CC4C)

Care Coordination for Children (CC4C) is an at-risk population management program that serves children from birth to 5 years of age who meet certain risk criteria. The main goals of the program are to improve health outcomes and reduce costs for enrolled children.

Each child served by CC4C is linked to a specific Medical Home and CC4C Care Manager. The Care Manager works closely with the local medical practice serving as the child's Medical Home to coordinate roles and responsibilities and ensure the child obtains necessary care. CC4C staff also work in close collaboration with their local called Community Care of North Carolina (CCNC) networks to access care management histories, Medicaid claims and other vital records, and to coordinate care management services. CCNC networks also assist in quality improvement and in evaluating program effectiveness.

### **Referral Criteria**

Children with Special Health Care Needs (chronic physical, developmental, behavioral or emotional conditions) who require health and related services of a type and amount beyond that required by children generally.

- Children exposed to severe stress in early childhood, including:-- Extreme poverty in conjunction with continuous family chaos
  - Recurrent physical or emotional abuse
  - Chronic neglect
  - Severe and enduring maternal depression
  - Persistent parental substance abuse
  - Repeated exposure to violence in the community or within the family
- Children in foster care who need to be linked to a Medical Home
- Children in neonatal intensive care needing help transitioning to community/Medical Home care
- Identified Children with potentially preventable” hospital costs

### **Childbirth (Lamaze) Classes**

A fun, interactive class that teaches techniques to reduce child birthing fears and stress. The classes are taught by ASPO Lamaze Certified Instructors and are open to all pregnant women. There are four classes in a series, held on Tuesdays at Forsyth County Department of Public Health from 7-9 pm.

**Nurse-Family Partnership** is an evidenced-based nurse home visiting program for first time, low income pregnant women and their families starting early in pregnancy until the baby’s second birthday.

You may qualify for Nurse-Family Partnership if you:

- Are pregnant with your first baby.
- Live in Forsyth County.
- Are early in your pregnancy.
- Have an income that qualifies you for Medicaid or WIC.

#### How does the program work?

Through weekly or twice a month home visits starting early in pregnancy until the baby is two years old, nurses support first-time moms toward three goals:

1. Improved pregnancy outcomes
2. Improved child health and development
3. Improved economic self-sufficiency of the family

How can I find out more about Nurse-Family Partnership?

- Please visit our national website at <http://www.nursefamilypartnership.org>
- If you would like more information about Nurse-Family Partnership in Forsyth County or to find out if you can participate, please call our office at 703-3185.

**The Pregnancy Care Management (PCM)** program provides care management for patients identified as being at risk for poor birth outcomes in Forsyth County. The level of service provided is based on the individual’s identified needs. Care managers closely monitor the pregnancy through regular contact with the physician and patient to promote a healthy birth outcome. Patients are

followed for two months after delivery to encourage follow up with the physician during the postpartum period and assisting patients with finding a primary care provider for routine care. The PCM model designates certain pregnancy risk factors as “priority” risk factors for the purposes of ensuring the recipients with these risk factors are assessed by a care manager to provide needed support services

**You may be high risk if you:**

- Have ever had a premature baby (baby born before 37 weeks).
- Are pregnant with twins, triplets, etc.
- Have diabetes, high blood pressure, HIV, sickle cell, asthma, seizure disorder, mental illness, or other conditions which can affect your pregnancy.
- Are in an unsafe living environment (homeless, unstable housing, family violence, sexual abuse, community violence).
- Smoke or use tobacco products, drugs or alcohol while you are pregnant.

## **Family & Community Health Programs**

**The Healthy Beginnings** program is a free case management service that focuses on, but is not limited to, minority women of the community that need a friend and support system through their pregnancy and during the first two years of the child’s life. The mother will have one-on-one support with a health educator to help make the pregnancy and toddler years an enjoyable and healthy experience. Healthy Beginnings was originally created to encourage men to be involved in the pregnancy and the child’s life. Although the program now focuses on case management for women, we still offer support and guidance to the men of our enrolled mothers.

**The Parent Education Program** is designed to reach parents and early education and child care professionals in the community to provide educational activities and interventions that seek to promote positive parenting, improve child health and reduce disease or injury. A few of the activities include a prenatal parenting class series, Infant/ Child CPR classes, SIDS training for parents and early education and child care professionals, and other classes on health related topics as requested.

### **Family Planning Health Education**

The Health Education Program in the Family Planning Clinic at the Department of Public Health provides patients with information necessary to make informed decisions about birth control and child spacing. In addition to helping patients choose a birth control method, health educators focus on assisting patients in using their chosen method accurately and consistently to achieve the highest possible level of efficacy.

### **Health Check**

Northwest Community Care Network (NCCN) oversees the Health Check Program of Forsyth County. The primary goal of this program is to ensure that all eligible children have access to health care. The Health Check Coordinator (HCC) provides outreach education to Medicaid eligible families, community providers and establishes relationships with primary care providers in the county.

### **Chronic Disease Management and Fall Prevention (Diabetes Support Group/ Continuing Education)**

Participants will make weekly action plans, share experiences, and help each other solve problems they encounter in creating and carrying out their self-management program. Physicians, diabetes educators, dietitians, and other health professionals both at Stanford and in the community have reviewed all materials in the workshop. Classes are highly participative, where mutual support and success build the participants' confidence in their ability to manage their health and maintain active and fulfilling lives. Classes are held in the community.

### **Adult Health Programs**

#### Wellness and Weight Loss

- Educational materials and other resources to assist you in improving or maintaining good health
- Free education and exercise classes, workshops and lunch & learns
- Area walking trail maps and information

#### Parenting Education

- Provides free parent classes and workshops to the community on various topics such as *Safe Sleep*, *SIDS* and child development: birth through adolescence.
- Free community resource guides

#### P.O.S.S.E. ( Prevent Ongoing Spread of STI's Everywhere)

- The POSSE Team provides non-clinical, off-site HIV/STI screenings and education in non-traditional locations in Forsyth County such as churches, jails, universities, homeless shelters, night clubs, community health fairs, etc.

### **Breast & Cervical Cancer Control Program (BCCCP)**

The WomanWise Program provides screening (breast exams, mammograms and Pap smears) for early detection of cancer in uninsured women who meet income eligibility. The WISE WOMAN Clinic provides heart disease screening for women who are already enrolled in the WomanWise Program. The services include blood pressure screening, height and weight measurements, health coaching sessions and cholesterol tests.

### **Selected Clinics**

#### **Cleveland Avenue Dental Clinic**

Our office welcomes families and individuals to our practice. We enjoy improving oral health as well as our patients' overall health. Our services include:

- Regular Checkups
- Cleanings
- Restoring Decayed Teeth
- Replacing Missing Teeth

**Neighborhood Clinics**

These clinics are held each month at in our community in order to serve persons who have difficulty in getting to the Health Department. They are intended for adults and children who do not have private doctors. The first two clinics below offer services which include health screenings, immunizations, and laboratory testing. All services are free of charge, walk-in only (no appointments), and are provided by registered nurses from the Health Department, along with volunteer physicians. The Rescue Mission Medical Clinic only provides health screenings (every Thursday) and dental extractions (on the second and fourth Thursdays).

- Bethany Baptist Church
- Rescue Mission Medical Clinic
- Rescue Mission Dental Clinic

**Immunization Clinic**

The Immunization Clinic provides child and adult vaccines which are administered by Registered Nurses. Vaccines that are required by NC Immunization Law, as well as those that are recommended by the Centers for Disease Control, for children and adults are available. Vaccines are provided without charge in some situations, while some vaccines require a fee.

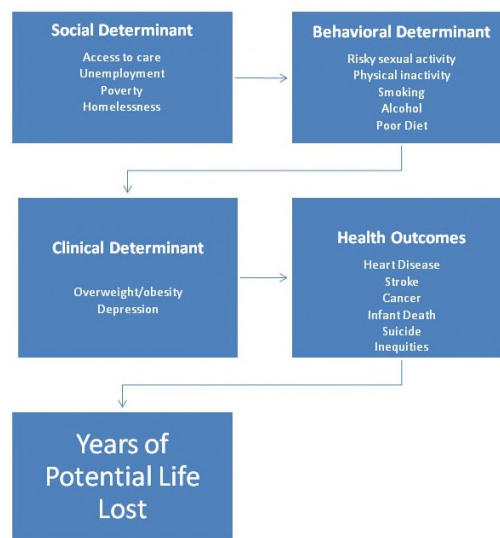
[http://www.forsyth.cc/PublicHealth/immunization\\_clinic.aspx](http://www.forsyth.cc/PublicHealth/immunization_clinic.aspx)



## Chapter 6: Community Concerns and Priorities Results

The CHA Data Team identified 17 social, clinical, behavioral and health outcomes after analyzing and interpreting Forsyth County's primary and secondary data as listed below. The top three priority areas (Chronic diseases, Infant mortality and Mental health) were selected based on years of potential life lost and magnitude of the issues.

The following social, behavioral, clinical determinants and health outcomes were identified after analyzing and interpreting Forsyth County primary and secondary data for the 2014 Community Health Assessment Process.



A combination of an online survey and paper surveys were conducted to rank the top three health issues in July 2015. There were a total of 442 completed the surveys. Participants were predominantly females (78%) and whites-(62%). There were 16% Hispanics; 91% were employed full time; 55% had lived in Forsyth County for more than 15 years and 68% lived in Winston-Salem. They ranked chronic diseases first followed by maternal & infant health as second and mental health was ranked third.

Years of Potential Years Lost (YPLL) is an estimate of the average years a person would have lived if he/she had Not died prematurely. Based on the YPLL, the total years of potential life lost associated with infant death accounted for 16,713 years during 2009-2013, averaging **78.1** years for each of the 214 dying from infant death during that period.

Identified Health Issues	Cancer	Heart Disease	Stroke	**Infant Mortality	Suicide
# of Persons who died in 2009-13	3,488	2,813	843	214	209
YPLL per person	16.4	14.3	11.6	<b>78.1</b>	33.7
*Inpatient Hos. Charge	\$51,810	\$35,651	\$31,409	\$35,344	N/A

\*Direct Cost Only  
 \*\*Perinatal/Condi/Born Only  
 13 County Health Data, NC SCHO

Community Action Plans will be developed for the three broad health outcomes of chronic disease, maternal and infant health and mental health. In these action plans, strategies are developed that can create change at multiple levels and in alignment with the Healthy North Carolina 2020 focus areas and also that address social determinants (poverty, homelessness, access to care and unemployment); behavioral determinants (risky sexual activity, alcohol, smoking, poor diet and physical inactivity); clinical determinants (obesity/overweight; depression) and health outcomes (heart disease, stroke, infant mortality, cancer, suicide and inequalities).

### **Maternal and Infant Health**

The Forsyth County Department of Health will be developing a community action plan focusing on infant mortality using the collective impact model. This approach will

- Bring people together in a structured way, to achieve change
- Start with a common agenda to collectively define the problem.
- Creates a shared vision to solve the problem
- Establish shared measurements, and an agreement to track the progress in the same way, which allows for continuous improvement.
- Foster mutually reinforcing activities in a coordinated effort
- Encourage continuous communication that builds trust and relationships among all participants.
- Require a strong backbone organization dedicated to orchestrating the work of the group

There is some evidence that preconception education interventions increase healthy behaviors among participating women (Temel 2014, Cochrane-Whitworth 2009). Potential beneficial outcomes will include increased preconception planning, improved health-related knowledge and improved birth outcomes.

### **Chronic Disease**

There are several evidence-based and scientifically supported chronic disease self-management (CDSM) programs which are education and behavioral interventions that support patients' active management of their condition in their daily life. These programs may focus on self-monitoring and medical management, decision making, or adoption and maintenance of health-promoting behaviors to minimize disability and delay the progress of chronic disease. These programs are usually delivered in health care settings by health professionals, but may also be delivered by lay individuals in community settings or via computer or phone applications or messaging. The components of self-management interventions vary by specific chronic disease. Potential beneficial outcomes will include:

- Increased healthy behaviors
- Improved quality of life
- Improved mental health
- Reduced hospital utilization
- Improved chronic disease management

### **Mental Health**

There is strong evidence that integrating behavioral health into primary care practice improves mental health (Cochrane-Bower 2011), especially depression symptoms (CG-Mental health, Butler 2011, Gilbody 2006a). Integrating care also increases patients' adherence to treatment, improves their quality of life (Thota 2012), and increases engagement with health care providers (Wissow 2013).

Integrating behavioral health into primary care practice brings mental health and/or substance abuse screenings and treatments into a primary care setting. These efforts can include collaboration between primary care providers, case managers, behavioral health consultants, and mental health specialists, and often, require training and redefinition or realignment of staff roles (SAMHSA-HRSA-Integrate, CG-Mental health). Mental health conditions and substance abuse issues often occur with other chronic medical conditions; patients with severe conditions are referred to specialty care (SAMHSA-HRSA-Integrate).

#### **Expected Beneficial Outcomes**

- Improved mental health
- Increased adherence to treatment
- Improved quality of life
- Increased patient engagement
- Reduced drug and alcohol use

## Chapter 7: Communication Plan

FORMAT	MEANS OF DISTRIBUTION	TIME LINE
Final Report		Completed July 2015
	Forsyth County Website: <a href="http://www.forsyth.cc/PublicHealth/publications.aspx">http://www.forsyth.cc/PublicHealth/publications.aspx</a>	Summer 2015
	Forsyth County Health Community Coalition Website: <a href="http://www.healthycommunity.ws/">http://www.healthycommunity.ws/</a>	Summer 2015
	Forsyth Futures Website: <a href="http://forsythfutures.org">http://forsythfutures.org</a>	Summer 2015
	Hard Copies available in all Forsyth County libraries	Summer 2015
Brochure	8-Page Bi-fold design to summarize findings	Summer 2015
	Distributed to Board of Health Members	To be Scheduled
	Distributed to Board of Commissioners; elected officials and those who participated in the Priority Setting Session	To be Scheduled
	Mailing to Forsyth County Funders	To be Scheduled
	Available on the following websites as pdf for easy download and printing: <a href="http://www.forsyth.cc/PublicHealth/publications.aspx">http://www.forsyth.cc/PublicHealth/publications.aspx</a> <a href="http://www.healthycommunity.ws/">http://www.healthycommunity.ws/</a> <a href="http://forsythfutures.org/">http://forsythfutures.org/</a>	Summer 2015
PowerPoint Presentation	Presentation summarizing the CHA process, Primary & Secondary Data, Priority Setting, Recommendation & Action Plans	Summer 2015
	Presentation to Board of Health Members	To be Scheduled
	Presentation to Forsyth County Health Department Expanded Staff	To be Scheduled
	Presentation to Board of Commissioners	To be Scheduled
	Presentation to Forsyth County Healthy Community Coalition Members and CHA Working Groups	To be Scheduled
Written Articles	Identify opportunities to write articles summarizing findings and recommendations	On-going as identified
	Press Release to Media	Summer 2015
	Packet materials for Community Health Forums	On-going as identified